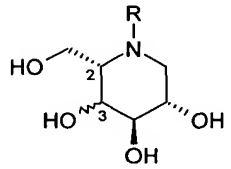
WHAT WE CLAIM IS:

1. A compound of formula (I) or a pharmaceutically acceptable salt or prodrug thereof:



(I)

wherein

R is C_{1-16} straight or branched-chain alkyl, optionally substituted by C_{3-7}cycloalkyl, and optionally interrupted by -O- the oxygen being separated from the ring nitrogen by at least two carbon atoms, or C_{1-10} alkylaryl where aryl is phenyl, pyridyl, thienyl or furyl wherein phenyl is optionally substituted by one or more substituents selected from F, Cl, Br, CF_3, OCF_3, OR^1, and C_{1-6} straight or branched-chain alkyl; and

R^1 is hydrogen, or C_{1-6} straight or branched-chain alkyl;

provided that the compound is not:

a) 3,4,5-piperidinetriol, 1-butyl-2-(hydroxymethyl)-, (2S,3R,4R,5S);

b) 3,4,5-piperidinetriol, 1-phenylmethyl-2-(hydroxymethyl)-, (2S,3R,4R,5S);

c) 3,4,5-piperidinetriol, 1-nonyl-2-(hydroxymethyl)-, (2S,3S,4R,5S);

d) 3,4,5-piperidinetriol, 1-dodecyl-2-(hydroxymethyl)-, (2S,3R,4R,5S); or

e) 3,4,5-piperidinetriol, 1-(1-phenyl)ethyl-2-(hydroxymethyl)-, (2S,3R,4R,5S).

2. A compound as defined in claim 1 wherein the hydroxyl group at position 3 is in the R configuration.

3. A compound as defined in claim 1 wherein R is C_{1-16} straight or branched-chain alkyl.

4. A compound as defined in claim 3 wherein R is C_{3-10} straight chain alkyl.

5. A compound selected from the group consisting of:

3,4,5-piperidinetriol, 1-propyl-2-(hydroxymethyl)-, (2S,3R,4R,5S)

3,4,5-piperidinetriol, 1-pentyl-2-(hydroxymethyl)-, (2S,3R,4R,5S)

3,4,5-piperidinetriol, 1-heptyl-2-(hydroxymethyl)-, (2S,3R,4R,5S)

3,4,5-piperidinetriol, 1-butyl-2-(hydroxymethyl)-, (2S,3S,4R,5S)

3,4,5-piperidinetriol, 1-nonyl-2-(hydroxymethyl)-, (2S,3R,4R,5S)

3,4,5-piperidinetriol, 1-(1-ethyl)propyl-2-(hydroxymethyl)-, (2S,3R,4R,5S)

3,4,5-piperidinetriol, 1-(3-methyl)butyl-2-(hydroxymethyl)-, (2S,3R,4R,5S)

3,4,5-piperidinetriol, 1-(2-phenyl)ethyl-2-(hydroxymethyl)-, (2S,3R,4R,5S)

3,4,5-piperidinetriol, 1-(3-phenyl)propyl-2-(hydroxymethyl)-, (2S,3R,4R,5S)

3,4,5-piperidinetriol, 1-(1-ethyl)hexyl-2-(hydroxymethyl)-, (2S,3R,4R,5S)

3,4,5-piperidinetriol, 1-(2-ethyl)butyl-2-(hydroxymethyl)-, (2S,3R,4R,5S)

3,4,5-piperidinetriol, 1-[(2R)-(2-methyl-2-phenyl)ethyl]-2-(hydroxymethyl)-, (2S,3R,4R,5S)

3,4,5-piperidinetriol, 1-[(2S)-(2-methyl-2-phenyl)ethyl]-2-(hydroxymethyl)-, (2S,3R,4R,5S)

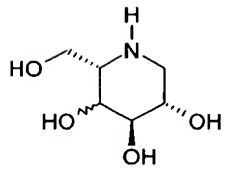
and pharmaceutically acceptable salts and prodrugs thereof.

6. The compound 3,4,5-piperidinetriol, 1-pentyl-2-(hydroxymethyl)-, (2S,3R,4R,5S), or a pharmaceutically acceptable salt or prodrug thereof.

7. A pharmaceutical formulation comprising at least one compound as defined in claim 1, but without provisos a), b), d) and e), optionally together with one or more pharmaceutically acceptable carriers, excipients and/or diluents.

8. A process for the preparation of a compound as defined in claim 1 which comprises:

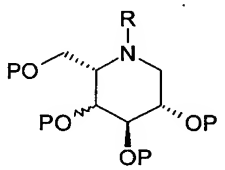
a) reacting a compound of formula (II):



(II)

with $NaBH_3CN$ and an aldehyde of formula R^2CHO, wherein R^2 is C_{1-15} straight or branched-chain alkyl, in acetic acid-methanol, or with $NaBH(OAc)_3$ and an aldehyde of formula R^2CHO, wherein R^2 is C_{1-15} straight or branched-chain alkyl, optionally substituted by C_{3-7}cycloalkyl, and optionally interrupted by -O- the oxygen being separated from the CHO moiety by at least one carbon atom, or C_{0-9}alkylaryl where aryl is as defined in claim 1, in a solvent; or

b) deprotection of a compound of formula (III):



(III)

wherein R is as defined in claim 1, and P, which may be the same or different, are hydroxy protecting groups.

9. A method for inhibiting glucosylceramide synthase comprising administering to a subject in need thereof a compound as defined in claim 1, but without provisos a) to e).

10. A method for the treatment or prophylaxis of a glycolipid storage disease comprising administering to a subject in need thereof a compound as defined in claim 1 but without provisos a) to e).

11. The method as claimed in claim 10 wherein the glycolipid storage disease is Gaucher disease, Sandhoffs disease, Tay-Sachs disease, Fabry disease or GM1 gangliosidosis.

12. A method for the treatment or prophylaxis of a disease selected from the group consisting of Niemann-Pick disease type C, mucopolysaccharidosis type I, mucopolysaccharidosis type IIID, mucopolysaccharidosis type IIIA, mucopolysaccharidosis type VI, mucopolysaccharidosis type VII, α-mannosidosis and mucolipidosis type IV, comprising administering to a subject in need thereof a compound as defined in claim 1, but without provisos a) to e).

13. A method for the treatment or prophylaxis of neuronal cancer including neuroblastoma, brain cancer, renal adenocarcinoma, malignant melanoma, multiple myeloma and multi-drug resistant cancers, comprising administering to a subject in need thereof a compound as defined in claim 1, but without provisos a) to e).

14. A method for the treatment or prophylaxis of a disease selected from the group consisting of Alzheimer's disease, epilepsy, stroke, Parkinson's disease and spinal injury, comprising administering to a subject in need thereof a compound as defined in claim 1, but without provisos a) to e).

15. A method for the treatment or prophylaxis of a disease caused by infectious microorganisms which utilize glycolipids on the surface of cells as receptors for the organism itself or toxins produced by the organism or disease caused by infectious organisms for which the synthesis of glucosylceramide is an essential or important process, comprising administering to a subject in need thereof a compound as defined in claim 1, but without provisos a) to e).

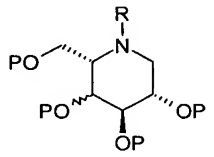
16. A method for the treatment or prophylaxis of a disease associated with abnormal glycolipid synthesis, e.g. polycystic kidney disease, diabetic renal hypertrophy and atherosclerosis, comprising administering to a subject in need thereof a compound as defined in claim 1, but without provisos a) to e).

17. A method for the treatment or prophylaxis of a condition treatable by the administration of a ganglioside such as GM1 ganglioside, comprising administering to a subject in need thereof a compound as defined in claim 1, but without provisos a) to e).

18. A method for reversibly rendering a male mammal infertile, comprising administering to a subject in need thereof a compound as defined in claim 1, but without provisos a) to e).

19. A method for the treatment or prophylaxis of obesity, comprising administering to a subject in need thereof a compound as defined in claim 1, but without provisos a) to e).

20. A compound of formula (III):



(III)

wherein R is as defined in claim 1, and P, which may be the same or different, are hydroxy protecting groups; provided that the compound is not:

i) piperidine, 1-phenylmethyl-3,4,5-tris(phenylmethoxy)-2-[(phenylmethoxy)-methyl], (2S,3R,4R,5S);

ii) piperidine, 1-phenylmethyl-3,4,5-tris(acetyloxy)-2-[(acetyloxy)-methyl], (2S,3R,4R,5S);

iii) piperidine, 1-phenylmethyl-3,4-di(acetyloxy)-5-(phenylmethoxy)-2-[(phenylmethoxy)-methyl], (2S,3S,4R,5S);

iv) piperidine, 1-methyl-3,4-di(acetyloxy)-5-(phenylmethoxy)-2-[(phenylmethoxy)-methyl], (2S,3S,4R,5S);

v) cholestan-3-ol, 1-phenylmethyl-3,4,5-tris(phenylmethoxy)-2-(hydroxymethyl)piperidine, (2S,3R,4R,5S), butanedioate, (3α,5α)-; or

vi) piperidine, 1-phenylmethyl-3,4-di(phenylmethoxy)-2-[(phenylcarbonyloxy)-methyl]-5-phenylcarbonyloxy, (2S,3R,4R,5S).